

# Hopping for Harmony

by Kevin Del Valle

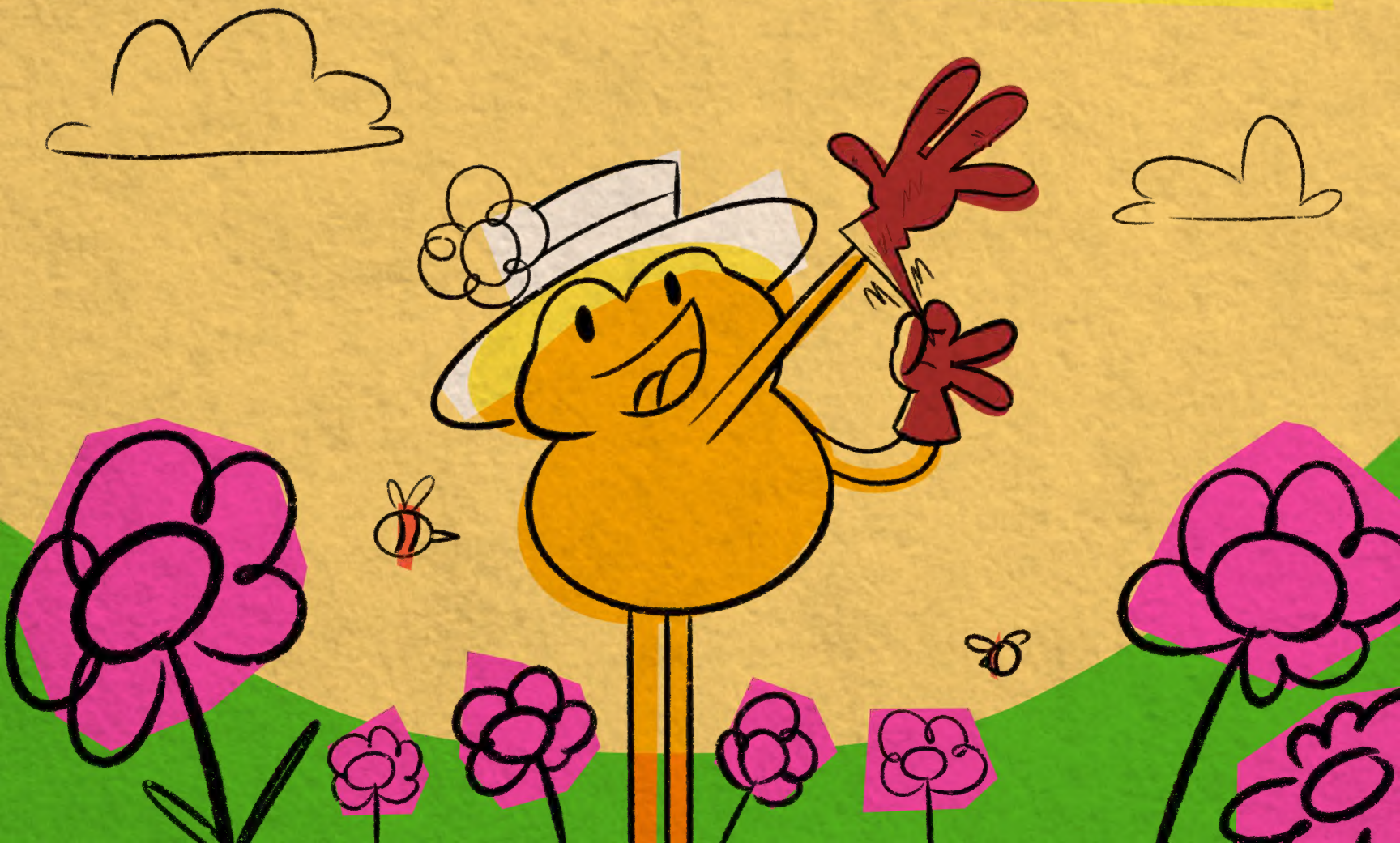




# DISCLAIMER

The following is not an in depth guide, it's purpose is to help beginners and cut any unnecessary details in order to not get overwhelmed by the program.

This is also not a guide on how to animate. Hopefully some of the stuff here will help you in some way

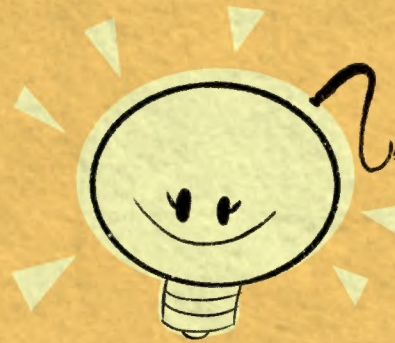




# Resources

The Animator's Survival Kit by Richard Williams

<https://www.toonboom.com/services/training>





# Contents

- >Intro
- Disclaimer
- Resources
- Contents(Hey,that's here!)
- Philosophy

- >Digital Animation Principles
- >Opening Software
  - camera view
  - Color Card

- >Timeline
  - Drawing/Frames

- >Toolbar
  - Selector & Contour tools
  - Brush vs Pencil
  - Onion Skin
  - Tool Properties

- >Coloring
  - Palettes
  - Swatches
  - Art Layers
  - Quick Coloring(Advanced)

- >Rigged Animation
  - Resources

- >Nodes
  - Node View
  - Node functions

- >Getting Started
  - Transform Tool
  - Drawing Substitutions
  - Layering
  - Deformer's Function
  - Types of Deformers
  - Library

- >End Quote
- Credits
- Goodbye





Clarity

Precision

Economy

"Today's obsession for speed and quantity has profoundly influenced the ways in which we think and feel.

There is very little time now for the perception of unnecessary details. The duration of the visual impression is too short.

Clarity, Precision and Economy are compelling values in a world suffocating in the fight of cross-purposes"

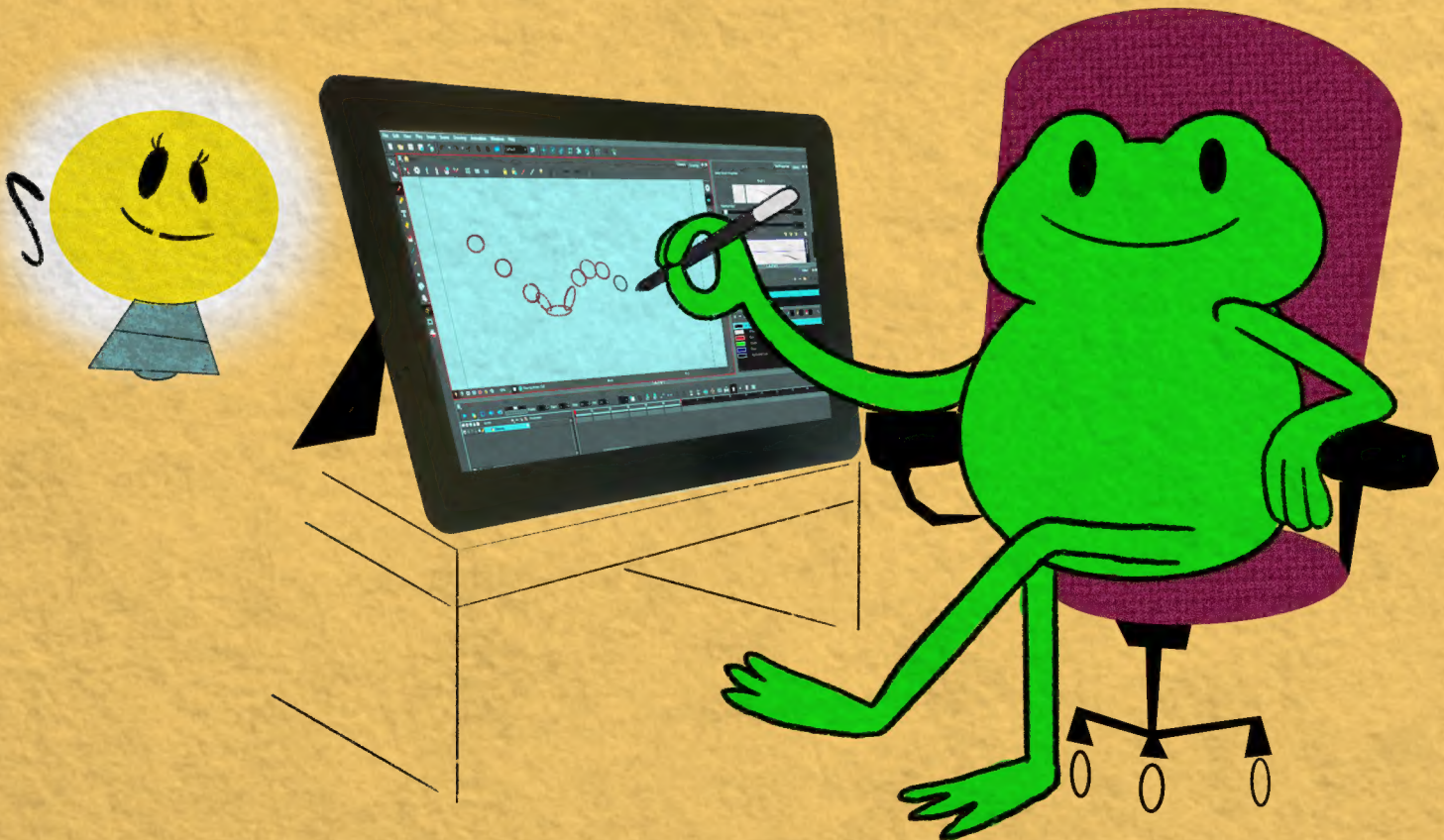
-Gyorgy Kepes (1949, Function in Modern Design)





# Digital Animation

The tools may change but the principles stay the same





# Back to the Principles

1: Solid Drawing

2: Arcs

3: Staging

4: Anticipation

5: Timing

6: Appeal

7: Exaggeration

8: Squash & Stretch

9: Secondary Action

10: Follow Through / Overlapping Action

11: Ease in / Ease out

12: Straight ahead / Pose to pose




As you go deeper into this, go back and remember the principles



# Opening Program



Name your project folder,  
choose a saving location and  
let's start our scene



A stylized illustration of a computer window with a light blue title bar and a dark blue body. The window contains a form for creating a new scene. The form has two main sections: 'Name' and 'Location'. The 'Name' section has a text input field containing 'NewScene' and a 'Create scene' button. The 'Location' section has a blue text input field, a 'Browse...' button, and a list of five dark blue rectangular buttons. On the right side of the window, there is a vertical stack of five light blue rectangular buttons. At the bottom right of the window, there is an 'Open...' button. The window is set against a background of green and yellow geometric shapes.

Name:

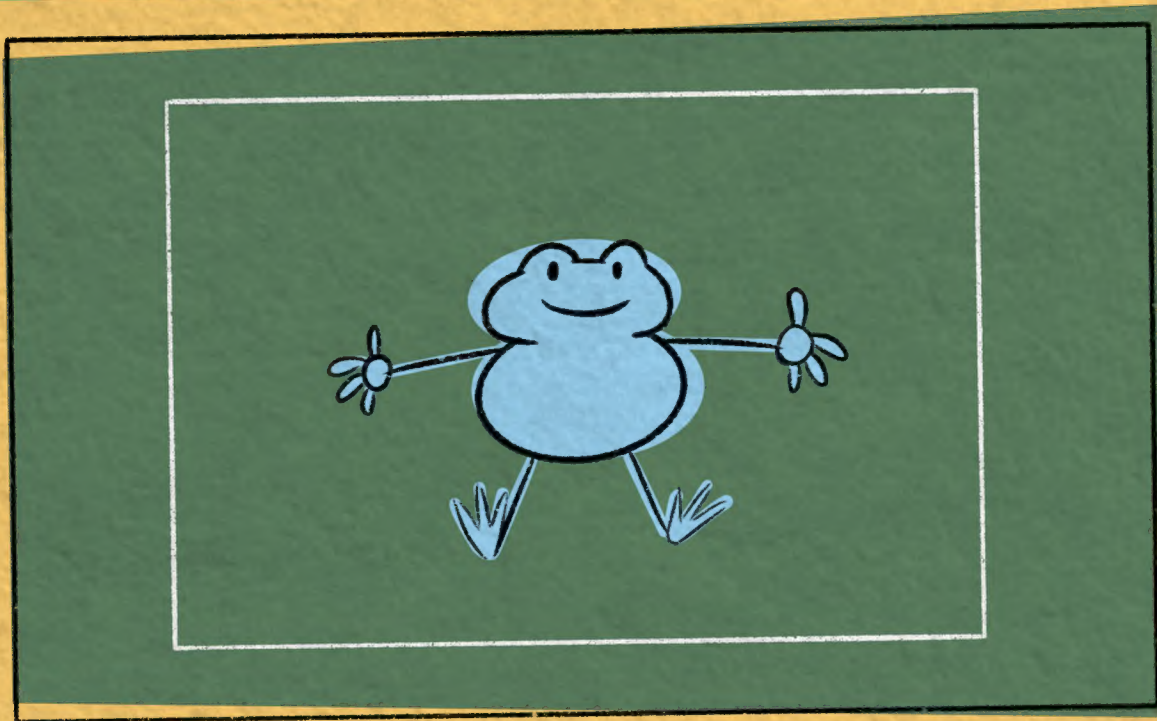
Location:



# Camera View

Here's where you'll draw.

The square represents your camera. Anything outside the square will not appear in the export.



Enable "Light Table" to subtly preview active layers

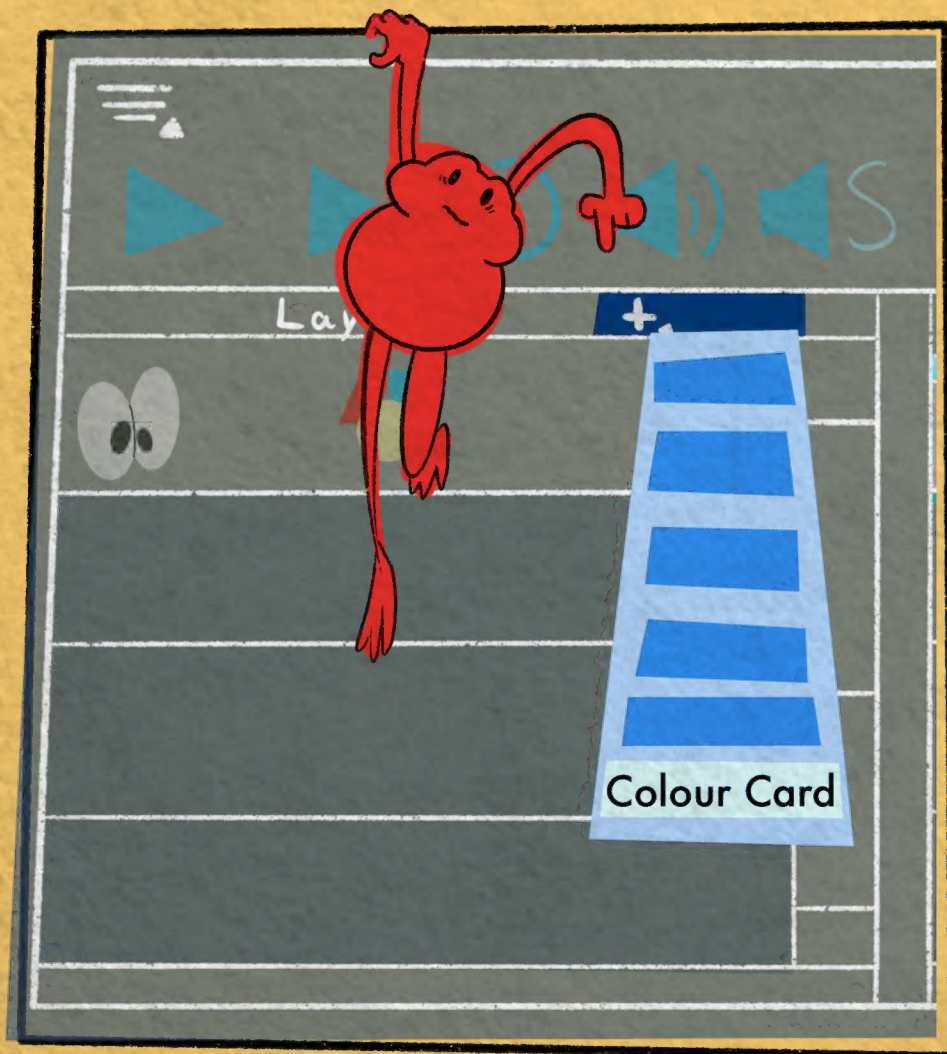
Shortcuts  
1= Zoom out  
2= Zoom in  
Space bar= Pan



# Colour Card

It's a solid background color

Before exporting, remember to add a "Colour Card" or else your export will appear completely black



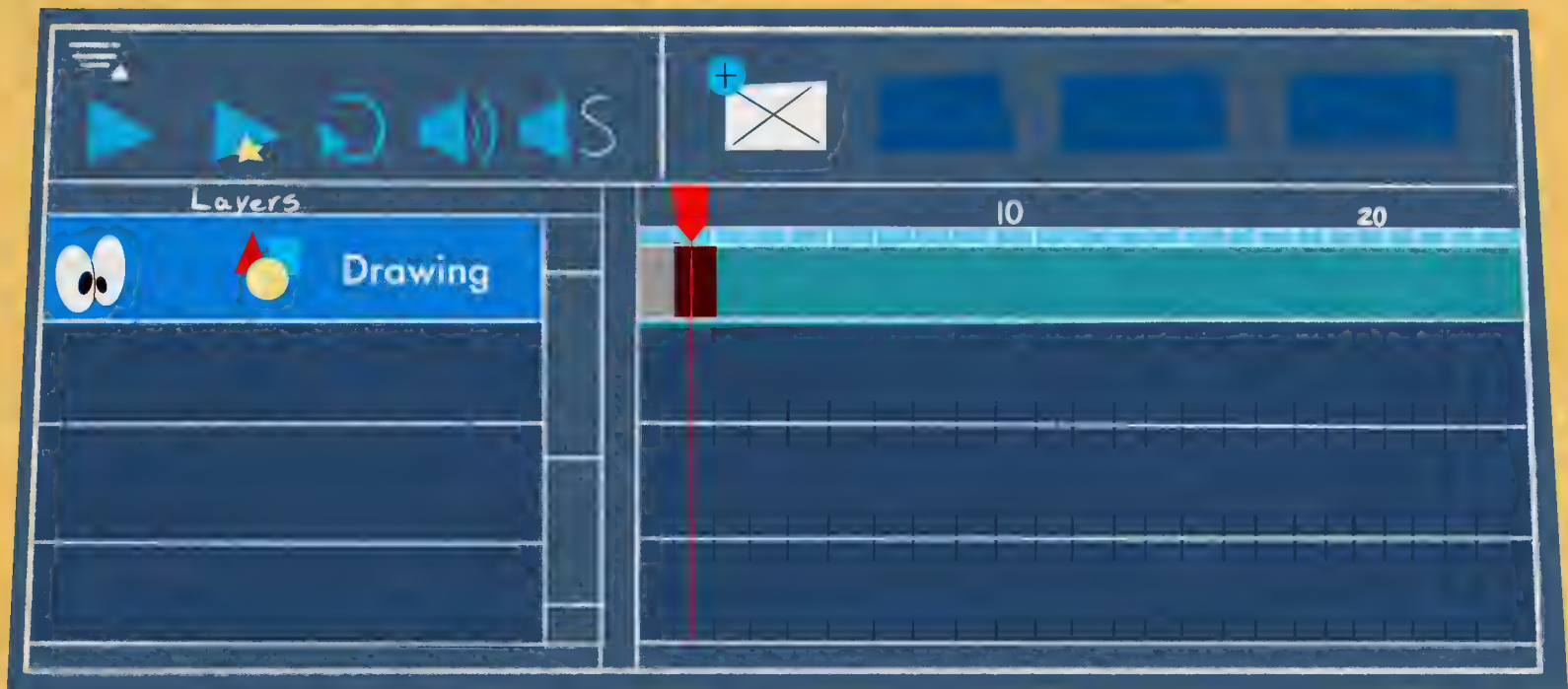
Find the "plus" button in the timeline and select Colour Card







# Timeline

Here's where you'll set your timing for animation. It's also the main view for ordering layers and adjusting scene length




 Play


 Render & Play

 Loop

 Enable sound

 Sound and scrubbing

 Create empty drawing

 Enable/disable

 Drawing/Exposure

 Timeline curser



## Shortcuts

Play= Shift + Enter

Scrub= ,(coma)/.(period)

Increase Exposure = Shift + Plus

Decrease Exposure = Minus

Add inbetween= Shift + J

Add Drawing Layer= Ctrl + R

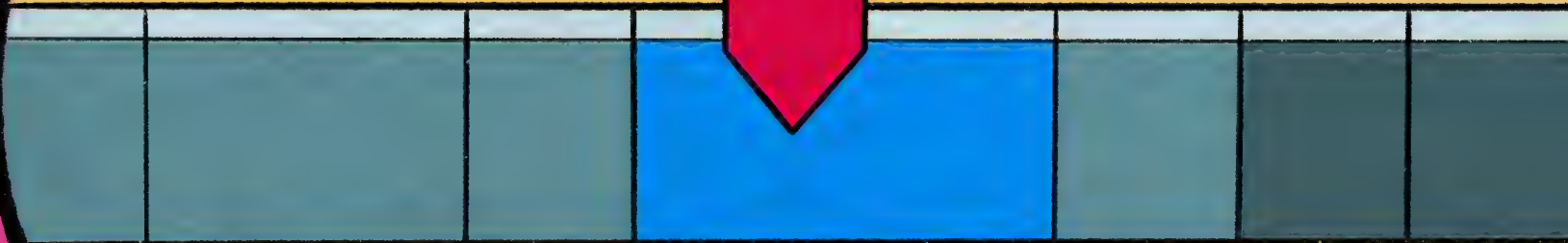
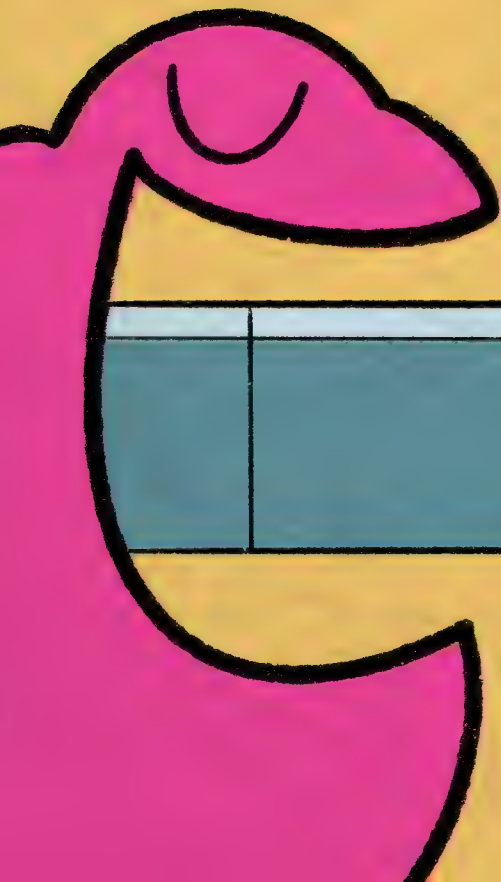


# Drawings

Drawings are the little grey squares in your timeline.

Let's take the traditional approach for now. Meaning you'll draw every new frame instead of relying on a rigged character to pose

Extend Exposure = [Shift] + [Plus Key]  
Decrease Exposure = [Minus Key]  
Add inbetween = [Shift] + [J]



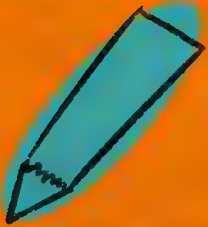


# Toolbar



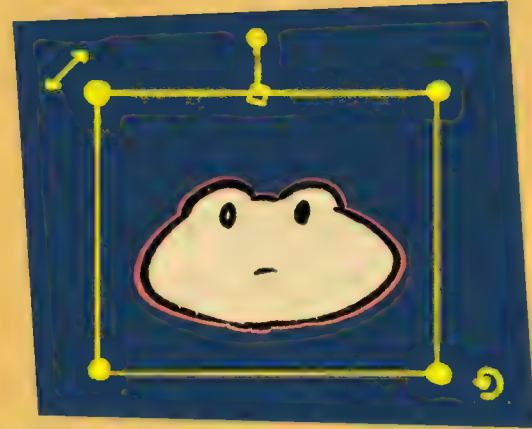
There are lots of tools in the toolbar and each of them have their own little sub function.

We'll be focusing on the main tools you'll use for traditional animation.





# Selector & Contour Tools



Selector Tool: scaling, position, rotate, resize, flip and delete



Contour Tool: Modify vector points. Useful for cleanup.





# Brush vs Pencil

Brush: Used more for roughing out the poses



Edits stroke width only



Pencil: Best option for cleanup as it allows you to edit the stroke much easier



Edits line shape





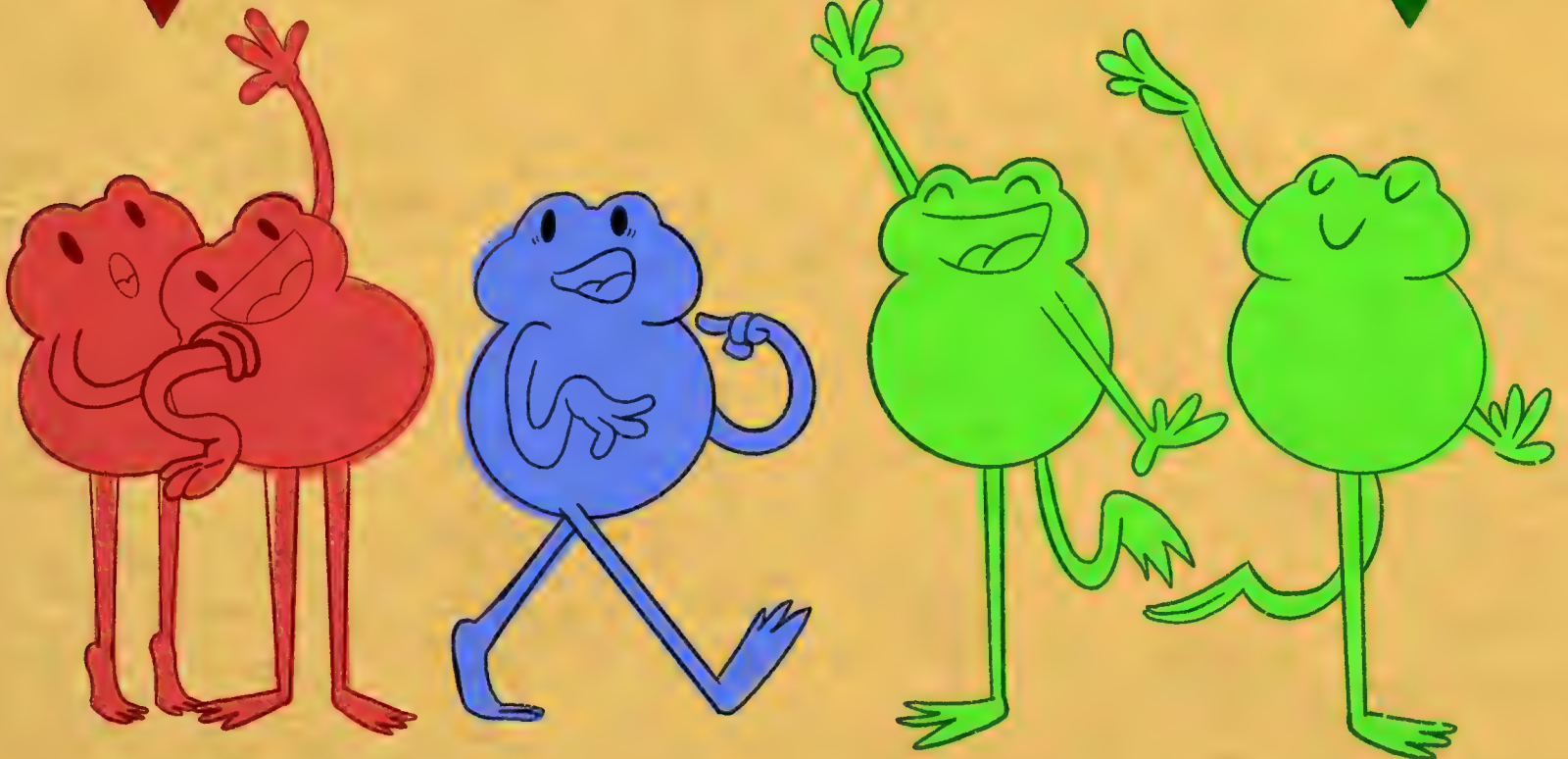
# Onion Skin



Allows you to view  
previous or next pose



## Exposure Length





# Tool Properties

Displays options for the currently selected tool. For example if your brush or pencil are selected, here you can change the size, smoothness and textures.





# COLORING

(vector)





# Color Palettes

Palettes are where your color swatches are stored. Create different palettes for individual characters or props, that way it's easier to find the colors you need and avoid confusion by having them all in just one palette.



You can import previously made palettes to other work projects.



# Swatches

Swatches are your color IDs which you can edit whenever you want. Create individual swatches for different parts of your character or prop.



Color Swatches

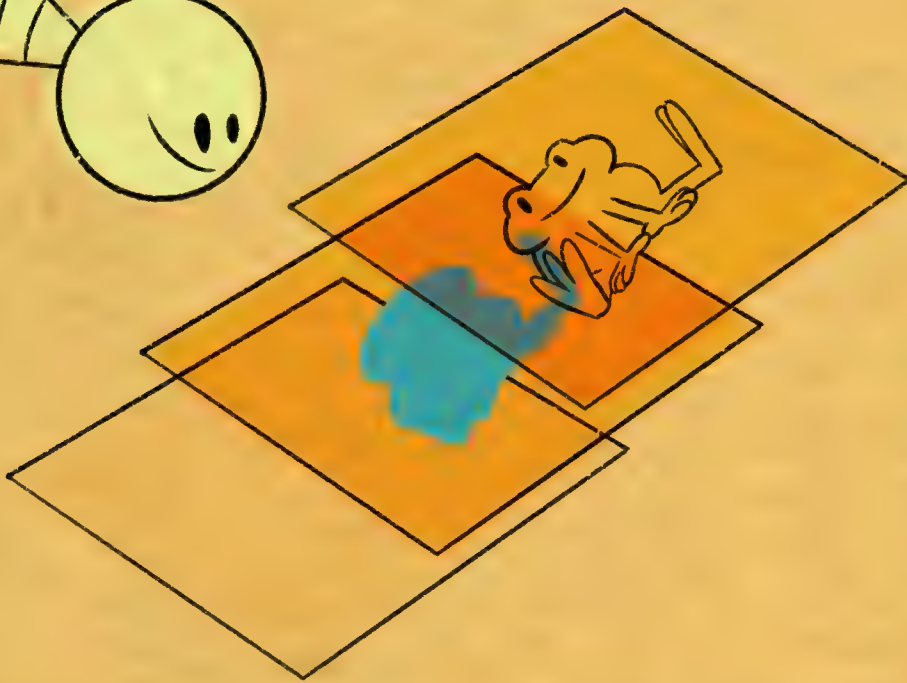


Double click on the color swatch to open the color picker and/or multi wheel. Here you can pick, make and edit whatever color you want.



# Art Layers

The Art Layers separate your artwork, keeping everything from becoming one big mesh.



The "Line Art" and "Color Art" are the only ones turned on by default but you can enable "Support Overlay and Underlay" in your preferences.



# Quick Color Filling

Once you're done with the line cleanup, it's time to color. Coloring takes a while so let's speed things up with the flat fill at least. This technique might be a bit advanced for a beginner but try to follow along.

## STEPS:

>Drawing tab

>Cleanup window

>Close Caps > Apply to all > Set ratio

>Tool Properties

>Click on "Apply to all Frames"

>"Create colour art from line art"

-(You can toggle the invisible strokes by pressing "K", though you'll need them on in the color layer, if any gaps are left opened, simply close them)

>Disable "Apply to all Frames"

>Click on your "Color Layer"

>Start painting with bucket





# Saving

Your project is grouped in a folder which holds everything in your project.

The "x.stage" is the file to open the project but if you copy/paste it by itself without the entire folder, your project will NOT open.



Save as: is the best way to make a new copy of your project without overwriting the previous version.



# Preferences

>General

These are simply some quality of life preferences you should turn on



Focus on mouse enter

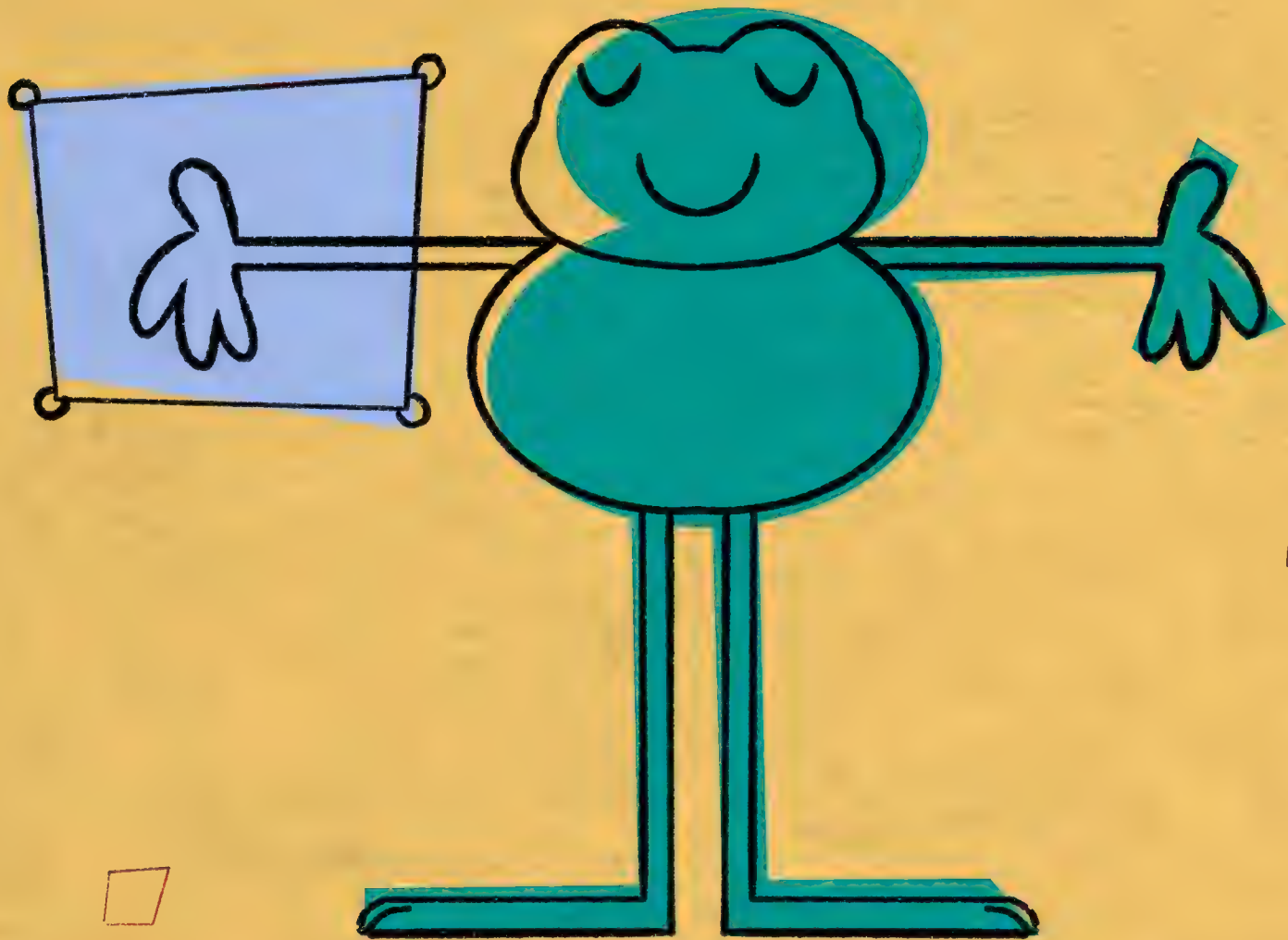


Stop motion keyframes





# 2D Rigged Animation



2D rigs are used to speed up production and most importantly, keep consistency within the project.

Cutout / Rig animation in Harmony is similar to animating in 3D but in a 2D view.



# RESOURCES

<https://www.toonboom.com/services/training>

<https://www.adamsanimationacademy.com/>

<https://www.youtube.com/zebirdbrain>





# Nodes







# Node View

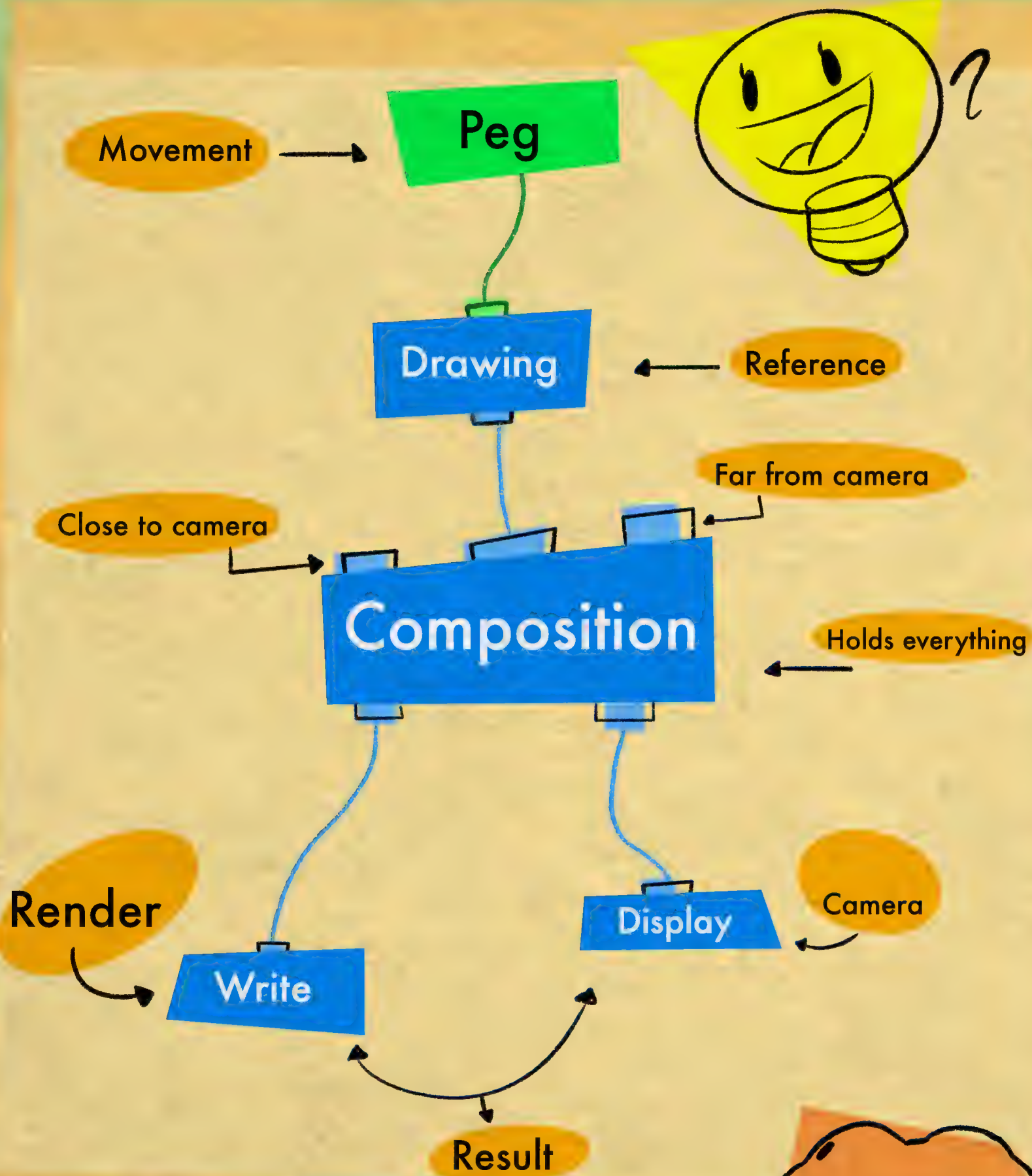
Here is where you'll see everything that is on the timeline displayed in a flat view. As an animator your main nodes are drawings and pegs.

You can adjust layering, add effects and composite. The node view is also where riggers built that cool character you're animating



 = Represent drawings or effects  
 = Pegs for animation







# Getting started

Your two main tools are the transform Tool and the Timeline. Every time you finish a pose you'll see a little square in the timeline, those are your keys and by default they'll be in "step", you can click on "set stop motion keyframes" to add auto inbetweens which you can adjust later on. It's important to do strong solid key poses first though!

Process



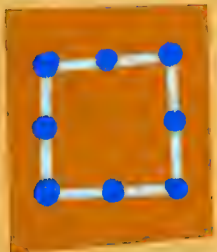
- Rough em out quickly or follow the animatic
- Pose to pose
- Adjust your blocking
- Inbetween
- Make sure everything is neat and tidy
- Lip sync (should always be last)



# Transform Tool

## Toolbar

It's what you'll use to select and move the character



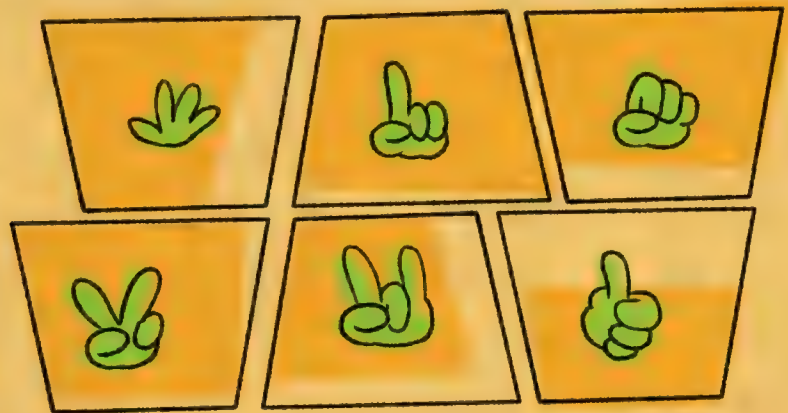
To select various elements and move up/down the hierarchy; select the elements you want and press "B" a few times until the child reaches the parent.



# Drawing Substitutions

It's a folder of multiple drawings in a single layer. Here's where you'll find your hands, mouths, assets and various pieces you will use throughout.

If you don't want/need a certain sub, don't delete it, simply eliminate the exposure then bring it back if you wish.



>Window  
>Drawing substitutions

Shortcuts:

[ ]: Toggle through subs quickly using the square brackets





# Layering



Move objects in the "Z" axis when something needs to be either in front or behind.



- > Select object with transform tool
- > Mouse has to be focused on the cam view
- > Toggle with the positioning

Shortcut:

Alt + up key / down key

Up key will move your element back

Down key will move your element forward





# Deformers

Deformers are used for multiple stuff like; clothing, joints, exaggeration, etc. You can turn them on and off at will. They animate similarly to the transform tool but you have to be more careful or else some stuff will look weird in motion (shrinking, breaking, floaty). So make sure you have solid poses.

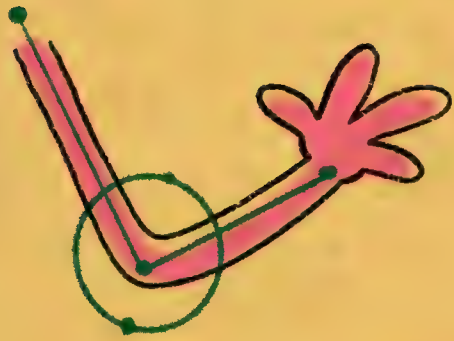


## Types of deformers

- Bone = More joint based (example, FK)
- Curve = More loose ( example, IK)
- Envelope = Larger manipulation







Bone Deformer

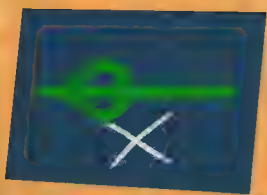


Curve Deformer



Envelope Deformer

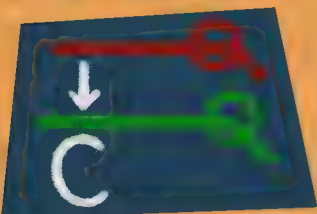
These switches are above the camera view.  
Make sure to select the element you want to manipulate



Show selected Deformer



Hide all controllers



Reset current keyframe





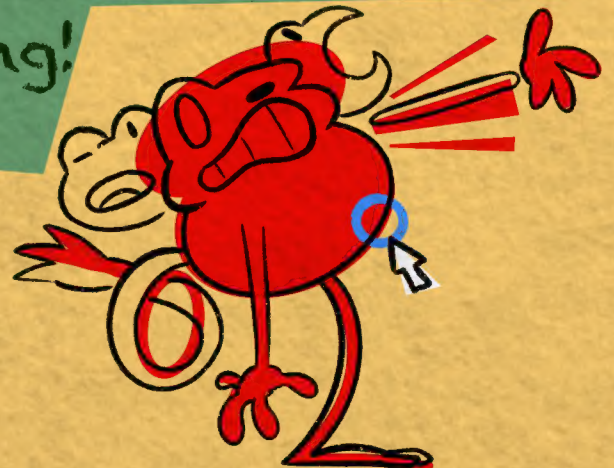
# Library

Helps you save poses, full animations, drawings, etc. This is helpful for importing, resetting and editing. It all gets saved on a special folder you create. To reset an entire rig that might be beyond fixing, drag and drop the saved pose to the same key.

## Reset Transformation

Shortcuts:  
Harmony = R  
Studio = Ctrl + T

Select the drawing you want and start resetting!





"Talent is a pursued  
interest. Anything that  
you're willing to practice,  
you can do."  
- Bob Ross

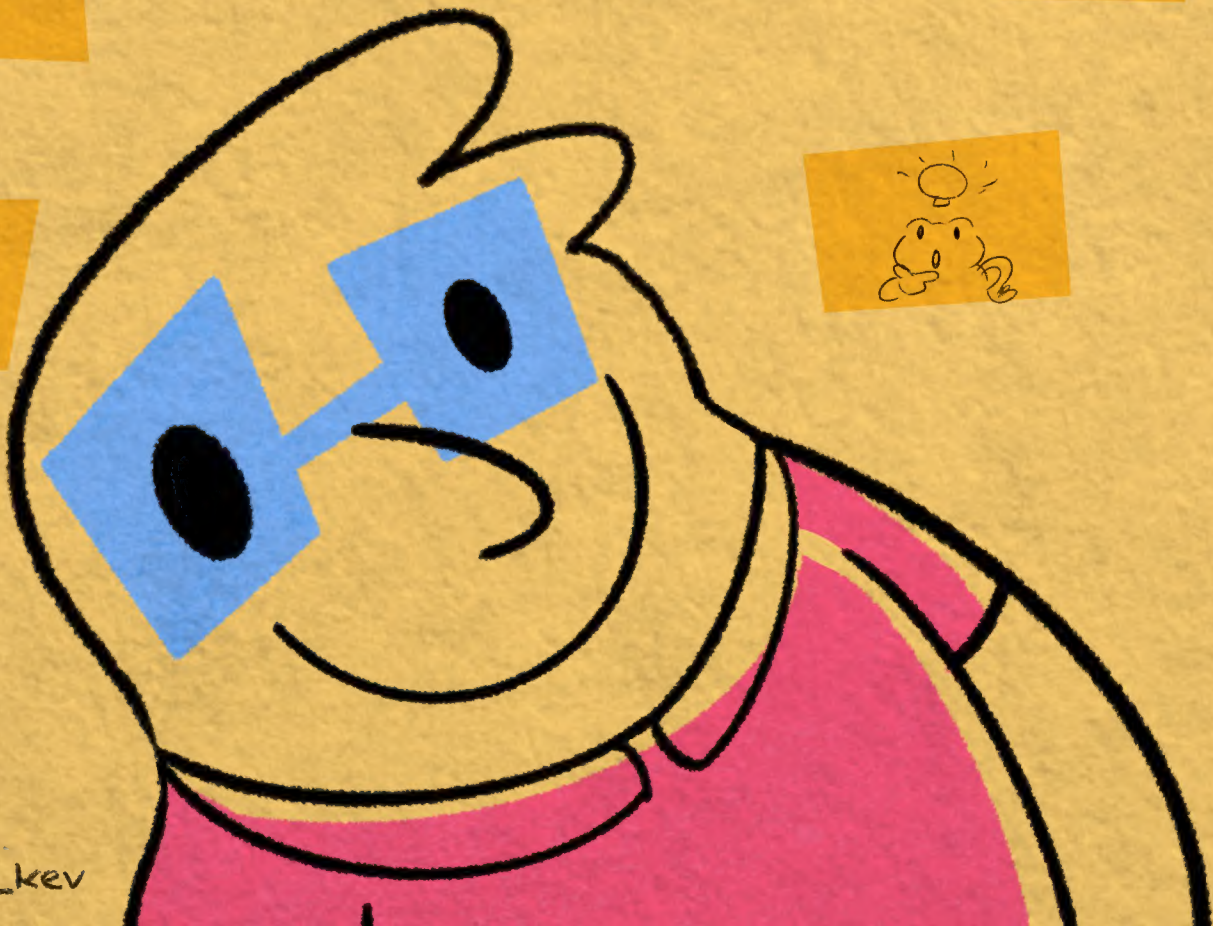




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# Good Luck



#HoppingForHarmony